## REMARKS

Applicant has cancelled claims 1-9, amended claims 10-14 and 16, and added new claims 17-21. Thus, claims 10-21 are currently pending in this application.

In the Office Action, the Examiner rejected claims 10 and 15 under 35 U.S.C. Section 102(e) as being anticipated by Warrts (US Patent No. 6,081,369). Although claims 10 and 15 have been amended, Applicant respectfully traverses the rejection to the extent that the rejection applies to the amended claims.

Referring to FIG. 3 of the specification, the present invention is directed to an optical spectrometer including an optical waveguide 10 and a photodetector 24 at one end of the waveguide. The other end of the waveguide 10 includes an exit slit having an entering area through which a selected wavelength of light that has been spatially separated by a diffraction grating 23 enters the waveguide 10. To emphasize that the present invention according to claim 10 is directed to a spectrometer, Applicant has added the language of "for spatial wavelength selection of spatially separated wavelengths". This added language makes it clear that the light received by the exit slit comes from a spectrometer element that spatially separates multiples wavelengths.

The Examiner cites Waarts as disclosing all elements of claim 10. Specifically, the Examiner stated that Waarts "teaches an optical spectrometer". To the contrary, Fig. 14, col. 19, lines 2-19, Fig. 4, col. 7, lines 7-13 and lines 40-41 which are cited in the Office Action are not relevant since Waarts describes neither the analysis of an optical spectrum nor does it mention an exit slit as component of an optical spectrometer. There is no mention anywhere in Waarts that its device is designed for use in a spectrometer.

Fig. 4 shows a cross-section of a waveguide with double cladding and a cross-section of the refractive index profile of

the waveguide. It is used to guide signal light in the core 40 and pumped light in the inner cladding 42 which is described in detail in the paragraph of column 6, line 66 to column 7, line 20. There is no vapor deposited opaque metal layer on the waveguide nor a slope to prevent light from penetrating into the core. Column 7, lines 40-41 gives exemplarily the size of the waveguide of a laser. There is, however, no aperture on the waveguide to reduce the beam cross-section at the end of the waveguide. The detector 150 of Fig. 14 absorbs light which exits the end of the waveguide (without additional aperture) via a beam splitter 148 which splits the power of the light **independent** of the wavelengths (emphasis added).

As the abstract of Waarts indicates, the invention is directed to "pumping" of laser light which means the Waarts device is directed to **generating** a laser light. By contrast, the exit slit and the waveguide of the present invention only uses the laser light and it certainly does not generate the light as disclosed in Waarts.

Even if the Waarts device can somehow be used in a spectrometer, which it cannot, it can only be used to provide a laser light generating source which may be coupled to the input slit 21 of FIG. 3 in the present application, but clearly not at the waveguide 10. If the Waarts device were to be connected at the waveguide end, the pumped and amplified laser power would be so powerful as to damage the photodetector 24.

The Examiner rejected claims 11-13 and 16 under 35 U.S.C. Section 103(a) as being obvious over Waarts in view of Korn (US Patent No. 6,304,688). Applicant respectfully traverses the rejection.

Applicant submits that claims 11-13 and 16 are patentable by virtue of their dependency from independent claim 10. Moreover, Korn also does not disclose a spectrometer. Korn produces through processing of the end surface, a type of lens

which can increase the coupling efficiency of a laser into a fiber, i.e., the power/performance of the fiber is increased (which is described in the abstract and extensively in col. 1, lines 12-56). By contrast, the core of the present invention is laterally sloped such that light entering via the sloped surfaces is not further guided in the core of the light waveguide.

In addition, Korn teaches away from the present invention. While the purpose of the Korn design is to increase the coupling efficiency of laser, the present invention is directed to decreasing the coupling efficiency by selectively allowing a particular wavelength while rejecting any wavelengths that fall outside of the entering area.

The Examiner rejected claim 14 under 35 U.S.C. Section 103(a) as being obvious over Warrts in view of Korn and further in view of Noell (US Patent No. 5,966,482). Applicant respectfully traverses the rejection.

Applicant submits that claim 10 is patentable by virtue of its dependency from independent claim 10. Moreover, the metal layer in the present application meets the purpose of permitting access of light into the fiber core only at the predetermined locations. In contrast, Noell uses the metal layer to prevent light from exiting the waveguide and hitting the sample (col. 6, lines 19-27).

Applicant has added new claims 17-21. Claim 17 recites the novel feature that the exit slit includes a light entering area through which the selected wavelength enters the fiber optic light waveguide and a sloped area in which the light entering into the sloped area is diffracted away from the core of the fiber optic light waveguide. None of the references teach such a novel exit slit feature.

As stated above, the Korn reference teaches away from the present invention. While the purpose of the Korn design is to

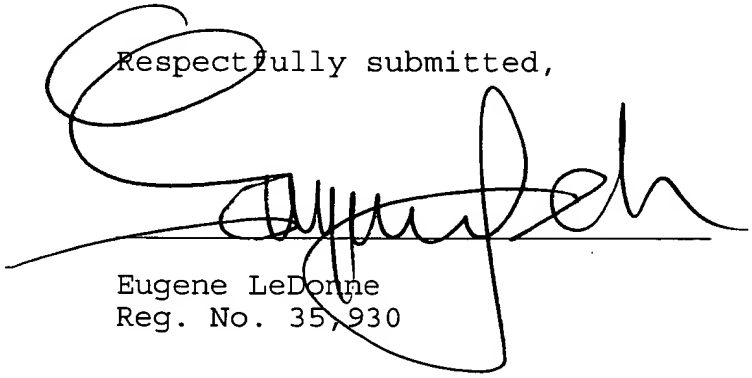
increase the coupling efficiency of laser, the present invention is directed to decreasing the coupling efficiency by selectively allowing a particular wavelength while rejecting any wavelengths that fall outside of the entering area.

Claim 21 recites the novel feature that the exit slit includes a light entering area through which the spatially separated light enters the fiber optic light waveguide and a vapor deposited opaque metal layer is formed around the entering area to at least partially block the spatially separated light from entering into the fiber optic light waveguide. None of the cited references teach or suggest such a novel exit slit feature.

Thus, Applicant submits that newly added claims 17-21 are novel and patentable over the cited references.

Based upon the above amendments and remarks, Applicant respectfully requests reconsideration of this application and its early allowance. Should the Examiner feel that a telephone conference with Applicant's attorney would expedite prosecution of this application, the Examiner is urged to contact him at the number indicated below.

Respectfully submitted,



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